

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. **(Currently amended)** A composition comprising a nucleic acid construct comprising:

a transgene flanked by two terminal repeat[[s]] sequences, wherein the terminal repeat sequences are derived from piggyBac transposon; and

a nucleic acid ~~encoding an~~ sequence encoding a chimeric integrating enzyme under the control of a promoter element, the chimeric integrating enzyme comprising a DNA binding domain and an enzymatic integrating domain, wherein the DNA binding domain is derived from a zinc finger domain and wherein the enzymatic integrating domain is derived from piggyBac transposase.

2. **(Withdrawn)** The composition of claim 1, wherein the promoter element is a promoter/enhancer.

3. **(Withdrawn)** The composition of claim 1, wherein the promoter is a site-specific promoter.

4. **(Withdrawn)** The composition of claim 3, wherein the site-specific promoter can be selected from at least the group consisting of the glial fibrillary acidic protein (GFAP) promoter, myelin basic (MBP) promoter, MCK promoter, NSE promoter, nestin promoter, synapsin promoter, Insulin 2 (Ins2) promoter, PSA promoter, albumin promoter, TRP-1 promoter, the tyrosinase promoter, the EIIA promoter, a promoter specific for breast tissue, such as the WAP promoter, a promoter specific for ovarian tissue, such as the ACTB promoter, or a promoter specific for bone tissue.

5. **(Original)** The composition of claim 1, wherein the promoter is inducible.

6. **(Previously presented)** The composition of claim 5, wherein the inducible promoter can be selected from at least the group consisting of human heat shock promoter, Egr-1 promoter, tetracycline-responsive promoter, cre-lox recombinase system, and the human glandular kallikrein 2 (hK2) promoter.

7. **(Cancelled)**

8. **(Cancelled)**

9. **(Cancelled)**

10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Currently amended) The composition of claim 1, wherein the ~~integrating enzyme is a chimeric integrating enzyme comprising~~ DNA-binding domain is a host-specific DNA binding domain.
16. (Cancelled)
17. (Cancelled)
18. (Currently amended) The composition of ~~claim 1~~ claim 15, wherein the host-specific DNA binding domain of the ~~chimeric integrating enzyme~~ is fused to the N-terminus of the ~~transposase enzymatic integrating domain~~.
19. (Withdrawn amended) The composition of ~~claim 1~~ claim 15, wherein the host-specific binding domain of the ~~chimeric integrating enzyme~~ is fused to the C-terminus of the ~~transposase enzymatic integrating domain~~.
20. (Currently amended) The composition of claim 1, wherein the nucleic acid sequence encoding the chimeric integrating enzyme is located outside the terminal repeats.
21. (Cancelled)
22. (Cancelled)
23. (Original) The composition of claim 1, further comprising a homologous sequence that is homologous to the host DNA.
24. (Withdrawn amended) The composition of ~~claim 14~~ claim 23, wherein the homologous sequence is located outside the terminal repeats.
25. (Withdrawn) The composition of claim 1, further comprising a protein binding sequence and a separate nucleic acid encoding two DNA binding domains.
26. (Withdrawn) The composition of claim 1, further comprising a protein binding sequence and a separate nucleic acid encoding a DNA binding domain and a protein-binding domain.